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OPERATING HANDLE LEVER FOR ROTARY BAR DOOR FASTENERS

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ATT
This invention relates to improvements in operating handle levers for rotating the actuating bars of door fasteners of the rotary type.

One object of the invention is to provide in a rotary bar door fastener, actuating lever means for rotating the operating bar, wherein the lever means comprises an operating handle member which is pivotted to the operating bar to swing in a vertical plane from operative horizontal position to pendant position, so designed that it may be easily assembled with the operating bar.

Another object of the invention is to provide an operating handle lever of the character specified in the preceding paragraph, which is provided with a forked connecting portion which embraces the operating bar at opposite sides and is pivotted to the bar by a pin extending through the spaced members of the forked portion and the bar, wherein one of the spaced members of the forked portion is an integral part of the handle lever, and the other member of said forked portion is in the form of a separate section which interlocks with retaining means on said handle lever and is held in rigid interlocked condition with respect to the handle lever proper by means of the pivot pin.

Other objects of the invention will more clearly appear from the description and claim hereinafter following.

In the accompanying drawings forming a part of this specification, Figure 1 is a broken, front elevational view of a wall member having a door opening therein, and a pair of hinged doors for closing the opening, wherein the doors are provided with a fastener of the rotary bar type, illustrating my improvements in connection therewith. Figure 2 is a broken rear elevational view, on an enlarged scale, of the structure and associated mechanism at the mid portion of the operating bar of the door fastener shown in Figure 1. Figure 3 is a horizontal sectional view, on an enlarged scale, through the operating bar of the door fastener, corresponding substantially to the line 2—3 of Figure 1. Figure 4 is a side elevational view of Figure 3, showing the operating bar broken away. Figure 5 is a horizontal sectional view, partly broken away, corresponding substantially to the line 5—5 of Figure 4. Figure 6 is a view, similar to Figure 5, with the operating bar omitted and showing the separable section of the handle lever detached from the lever member proper.

In said drawings, 10 designates the end wall member of a refrigerator automobile truck having a door opening 11 therein, which is closed by a pair of hinged doors 12 and 13. Each door member is provided with the usual sets of hinges 14—14 along the vertical outer edges thereof, by which the door is supported. The door 12, which is that first closed, and the door 13 have meeting edges which are beveled and so inclined that the door 13 holds the door 12 in closed position and weds the same shut when the door operating mechanism is actuated. The door 12 is provided with a rotary operating bar door fastener of well-known design, comprising the usual vertically disposed rotary bar 15, provided with keeper engaging crank members at the top and bottom ends which engage with slotted keepers fixed to the car wall, only the upper crank member and lower keeper being shown in Figure 1 of the drawings, the same being indicated by 16 and 17, respectively.

As is well understood by those skilled in this art, the door 13 is forced open and shut by camming engagement of the keeper engaging crank members with the keepers. As is common practice, the bar 15 is supported for rotation by the usual top, bottom, and intermediate guide or bearing brackets secured to the door, only the intermediate and bottom guide brackets, which are indicated by 18 and 19, respectively, being shown in the drawings.

In carrying out my invention, I provide a two-part operating handle lever A for rotating the bar 15, comprising sections B and C, and a pivot pin D for swungly connecting the lever to the bar and holding the sections of the lever in rigidly interlocked condition.

The operating lever A is in the form of a flat bar having a hand grip portion 20 at its outer end. The section B of the lever A, which carries the hand grip portion 20, is laterally enlarged, adjacent its inner end, as indicated at 21, and terminates in a longitudinally extending, flat, plate-like portion 22, offset to one side of the longitudinal central axis of the lever. The plate-like section is of substantially triangular contour, as shown, and is provided with a laterally inwardly projecting flange 23 along its upper edge, which is continuous with the upper portion of the laterally enlarged 21 of the section B. As shown most clearly in Figure 3, the flange 22 terminates short of the inner end of the plate-like section 22. The laterally enlarged portion of the section B of the lever A is recessed to provide a longitudinally extending pocket 24, the side walls of the pocket being defined by a relatively short wall section 25 at the outer side, terminating short of the end of said enlargement,
and a wall section 26 at the inner side of said head, continuous with the platelike portion 22 and terminating at a point spaced rearwardly from the end of the wall 25. The pocket is thus provided with front and rear openings 27 and 28. The section C of the lever A includes a triangular, platelike portion 29, similar to the triangular, platelike portion 22 of the section B of the lever. The platelike portion 29 is provided with a longitudinally extending, relatively thick, keylike rib 30 on its inner side at the forward end portion thereof, which extends forwardly beyond the end of said triangular, platelike portion, to form a projecting retaining lip or lug 31, which is engageable in back of the wall section 25. The keylike rib 30 and the projecting lip or lug 31 are of such dimensions as to snugly fit the pocket 24 when the parts are assembled with the lug or lip 31 engaged in back of the wall 25. In the assembled and applied condition of the parts of the lever A, the platelike portions 22 and 29 together form a forked portion which embraces the bar 15 on opposite sides, which forked portion serves to connect the lever to the bar.

The pivot pin D is in the form of a rivet engaged through aligned openings 32—32 at the lower corners of the triangular plate portions 22 and 29 and a pivot opening 33 in the bar 15. As will be evident, the pivot pin or rivet D, which serves as a pivotal connection to permit swinging movement of the lever A from horizontal to pendant vertical position, also holds the section C of the lever A interlocked with the section B by holding the keylike rib 30 and its projecting lip or lug portion 31 seated in the pocket 24.

I claim:

In an operating handle lever for a rotary bar, the combination with an elongated handle member having a longitudinal, laterally offset extension at its inner end, and a pocket in said member at the inner end thereof adjacent said extension, said pocket having a lateral side wall spaced laterally from said extension, said side wall having a flat transverse end face; of a detachable end section for said member, said end section having a transverse shoulder at its inner end and a laterally inwardly offset lug projecting beyond said shoulder, said lug being engaged in said pocket and in back of said side wall thereof, and said shoulder abutting the flat transverse end face of said lateral side wall, the end of said end section which carries the lug being in abutment with the inner side of said extension and having an outer end portion parallel to said extension in lateral spaced relation thereto; and a pin extending through said end section, extension and said bar, said pin connecting said handle member to said bar for swinging movement in a plane parallel to the length of said bar, said pin being headed at opposite ends, said heads being shoul-dered against said end section and extension to hold the same against spreading.

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REFERENCES CITED

The following references are of record in the file of this patent:

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